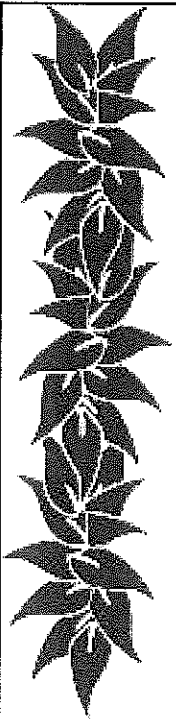


Age Standardization: Dispelling the “younger” Hawaiian population myth

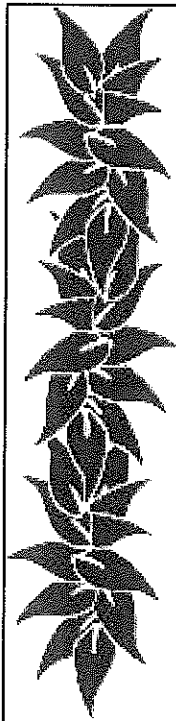
Nolan J. Malone
Kamehameha Schools
Research & Evaluation Division

Free Data Workshop – Native Hawaiian & Pacific Islander Focus
7 November 2007



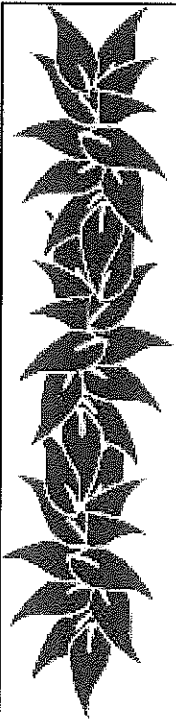
So What Is All This About?

- Inspired by debate over Native Hawaiian programs in the media
- One hypothesis suggests that the lower median age of the Native Hawaiian population (in Hawai'i) accounts for its lower SES standing relative to other ethnic groups
- Why not test this hypothesis using Census data & demographic tools?



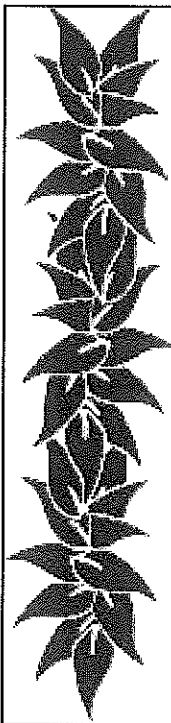
What Is Age Standardization?

- Age standardization is:
 - ...A simple methodology in which two or more populations are constrained to the same population age distribution
 - ...Commonly used in demographic and epidemiologic analyses
 - ...A tool that essentially removes the effects of “age” when comparing population-level statistics



How Is It Done?

- Various methods exist:
 - Apply the distribution of a “third” (unrelated) population to your comparison groups (populations)
 - Calculate an average population distribution for your comparison groups
 - Apply a synthetic population distribution to your comparison groups (e.g., the SEGI World Population)



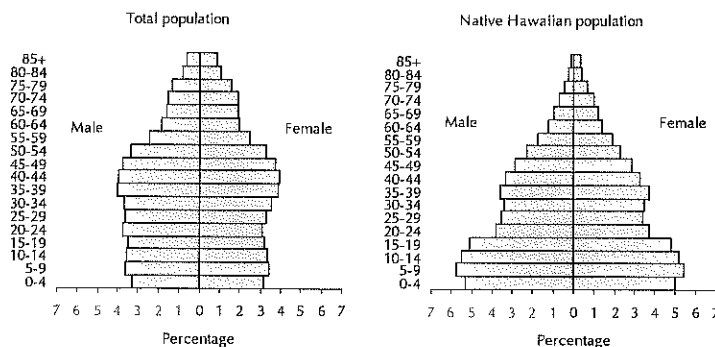
When Can You Do It?

- Three Criteria: You must...
 - ... be comparing an aggregate-level variable (usually a rate or proportion) among two or more populations
 - ... use variables that take on different values across age groups
 - ... have a theoretical basis for minimizing the effect of age for these populations

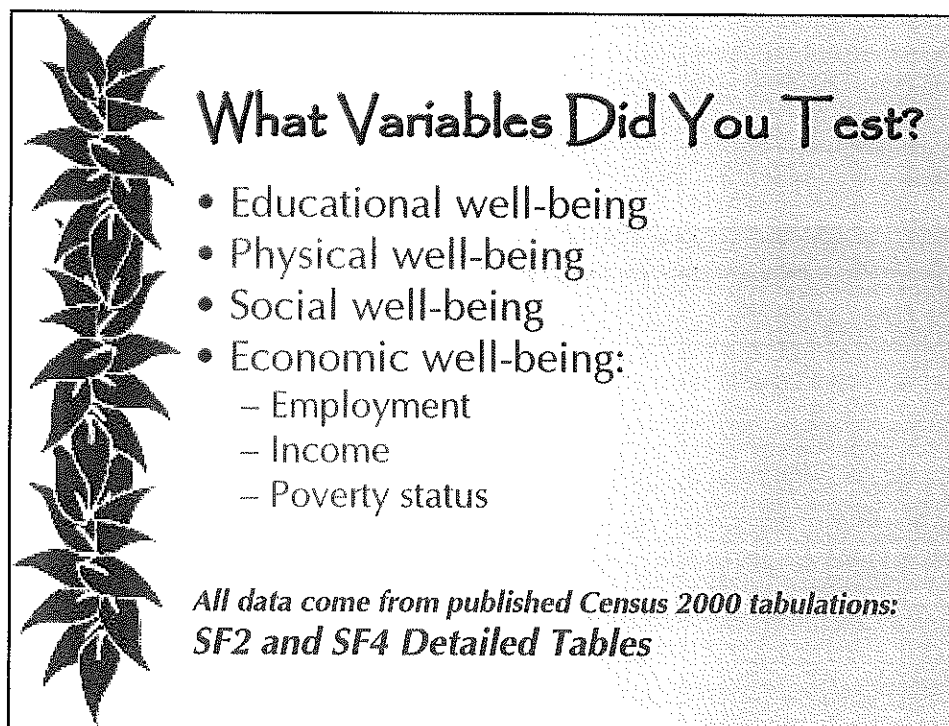
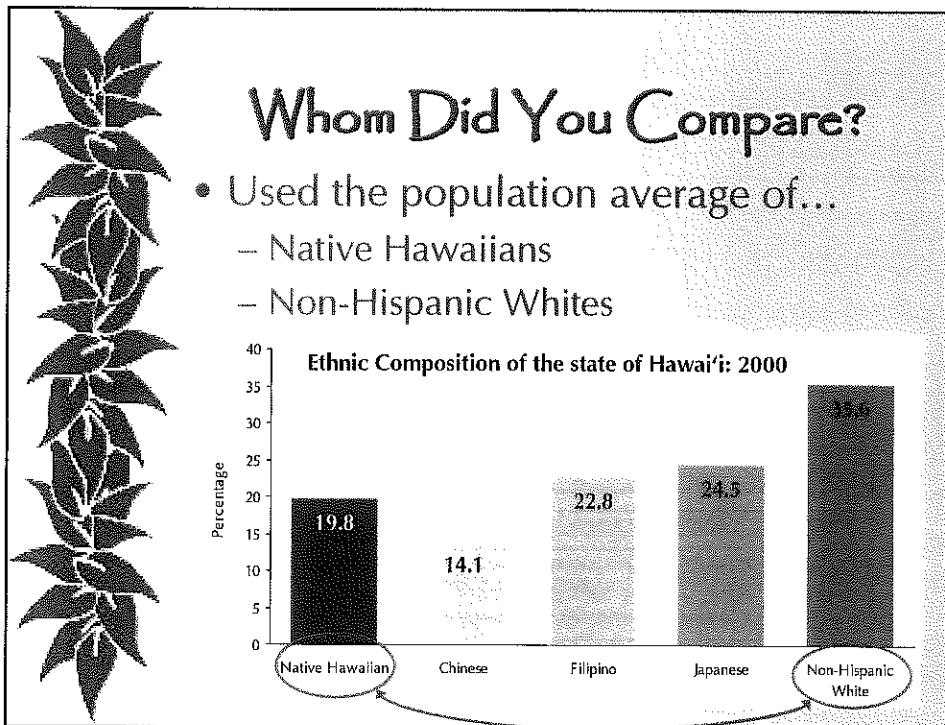


Any Merit to the "Age" Claim?

Yes, the Native Hawaiian population is "younger" than average in Hawai'i.



But the claim still requires analysis.



Details... Details...

- Simple calculations in Excel
 - Calculate AVERAGE population distribution
 - Apply the averaged age distribution to the age-specific rates
 - Then simply sum up the new pop-level statistic

HOMEOWNERSHIP Rates Standardized by Age of Householder

Universe: Households

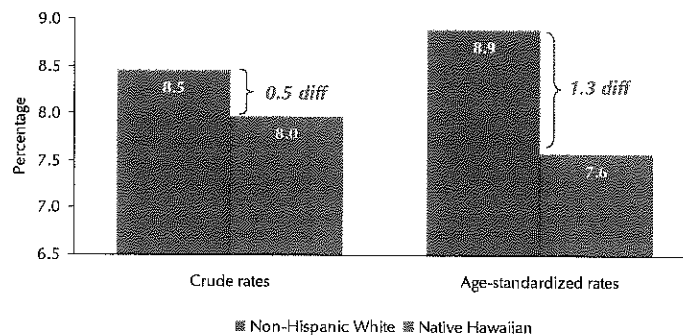
Data Set: Census 2000 Summary File 2 (SF 2) 100-Percent Data

Native Hawaiian - Non-Hispanic White Comparison							
	Non-Hispanic White householder age dist.	Native Hawaiian householder age dist.	Avg. householder age dist.	Non-Hispanic White homeownership rate	standardized Non-Hispanic White homeownership rate	Native Hawaiian homeownership rate	standardized Native Hawaiian homeownership rate
Hawai'i							
Total	1.0000	1.0000	1.0000	49.77	48.91	52.43	53.17
Householder 15 to 24 years	0.0488	0.0531	0.0510	8.29	8.42	14.50	14.74
Householder 25 to 34 years	0.1666	0.1883	0.1774	22.25	3.95	32.30	5.73
Householder 35 to 44 years	0.2290	0.2519	0.2404	41.63	10.01	47.68	11.46
Householder 45 to 54 years	0.2404	0.2175	0.2289	57.88	13.25	60.51	13.85
Householder 55 to 64 years	0.1435	0.1445	0.1440	67.73	9.75	67.96	9.79
Householder 65 to 74 years	0.0926	0.0922	0.0924	73.00	6.74	72.16	6.66
Householder 75 to 84 years	0.0630	0.0437	0.0534	73.95	3.95	74.59	3.98
Householder 85 years and over	0.0161	0.0089	0.0125	66.76	0.84	76.38	0.96

Results: Education

- College enrollment: Native Hawaiians are worse-off after standardization (below)
- Educational attainment: Native Hawaiians remain half as likely as NH-Whites to have a BA degree

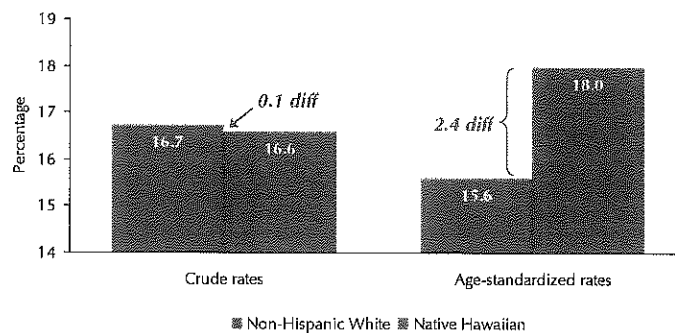
College enrollment rates in the state of Hawai'i, for non-Hispanic Whites and Native Hawaiians, ages 16 years and older: 2000



Results: Disability Status

- Native Hawaiian health advantage turns into *disadvantage*

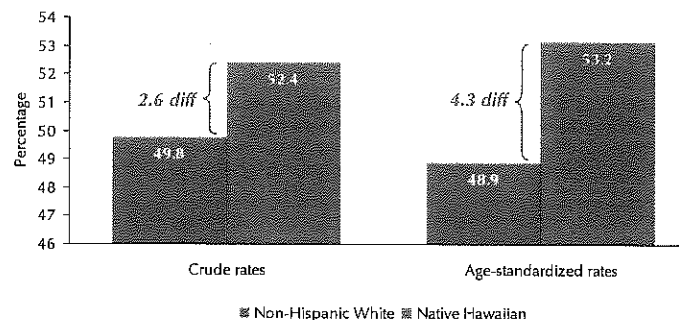
Disability rates in the state of Hawai'i, for non-Hispanic Whites and Native Hawaiians, for individuals ages 5 years and older: 2000



Results: Social Well-being

- Native Hawaiian's homeownership advantage turns into a slightly larger advantage
- Important to consider large (highly transient) military population & Hawaiian Homelands

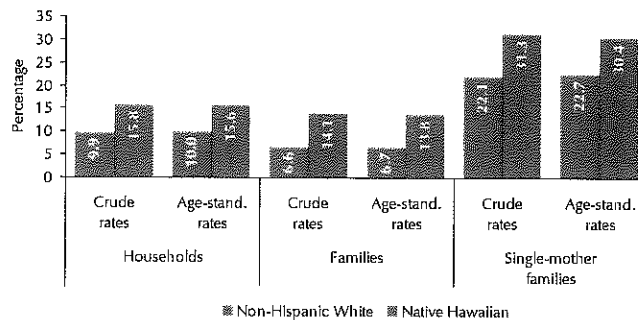
Homeownership rates in the state of Hawai'i, for non-Hispanic Whites and Native Hawaiians: 2000



Results: Poverty Status?

- Households: Hawns remain 50% more likely
- Families: Hawns twice as likely
- Single-mother families: Hawns 40% more likely
- Individuals: Hawns still 50% more likely

Household and family poverty rates in the state of Hawai'i, for non-Hispanic Whites and Native Hawaiians, by household/family type: 1999



Hmmm...Conclusions?

- It would appear that the critics were partly correct: adjusting for Native Hawaiian age distribution *does* affect well-being statistics...
- HOWEVER... In all but one case (homeownership), Native Hawaiians remain at a significant disadvantage ... and, in some cases, Native Hawaiian status worsens (disability status and college enrollment)



More Importantly...

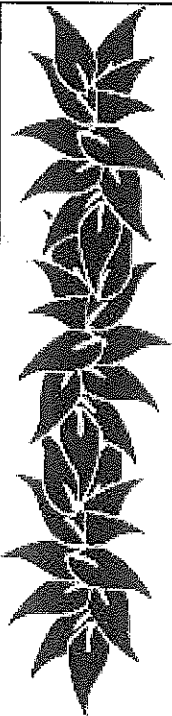
SIMPLE TOOL
(Age standardization)

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CENSUS DATA TABLES

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**ANSWER TO A LOCAL
"HOT BUTTON" ISSUE**



**Mahalo
nui loa.**

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